

In the Specification

Please replace the paragraph beginning at page 18, line 5 with the following:

When a requesting host application in an open system seeks to copy the data from the logical device 36A to the storage locations in logical device 40A, for example, the requesting host application initiates a process 90 including step 91 in FIG. 4 to interact with the data storage facility 24, particularly the host adapter controller and the device controller associated with the source, such as the controller 86 in the host adapter 26 and the controller 87 in the disk adapter 30 that is designated a source logical device. Step 94 begins a process for creating a session ID. Specifically, a host adapter controller, such as the controller 86 in the host adapter 26, transfers control to step 95 to establish and populate the data structure 70 of FIG. 3. Step 96 then establishes a session ID number. More specifically, there is associated with each Track ID Table a data block for containing protection bits. The data block can be considered as a two-dimensional array with one row for each track and one column for each session. In the Symmetrix disk array storage systems, each row is 2 bytes wide to define up to 16 sessions. This array is located as PB header [[96 ]]96A on each Track ID table. In the following discussion a particular PB bit position will be identified in the form PB(x,y) where x indicates a track in a cylinder and y indicates a session

number. During the session creation in step 95, the controller 87 determines whether any "y" column is available. If one is available, the controller 87 establishes a session identification correlated to the selected PB bit column. This assignment is applied to each PB header 96 associated with the source and destination devices. Establishing separate sessions enables multiple copying operations to be processed in parallel even with overlapping areas. For example it is possible to copy the data from the logical volume 36A to the destination logical device 40A and to copy the data in logical device 36B to the destination logical device 41A by establishing a separate session.

Please replace the paragraph beginning at page 23, line 5 with the following:

FIG. 7 depicts the procedures used by a copy program in the source logical device, such as the copy program 84 in the disk adapter 30 when the logical device [[31A ]]31 is the source logical device. Step 150 determines whether the session is "active", as will be described later. If it is not, step 151 aborts the operation of the copy program. Otherwise, step 152 uses the operating environment for the session to identify the destination logical device.

Please replace the paragraph beginning at page 25, line 8 with the following:

FIG. 8 depicts the response to a write request from an application, such as occurs when the HOST APP A application 22 attempts to write data to the source logical device 36A. Read requests are processed in a conventional form as they do not alter the data. For a write request, however, the host adapter 26 passes the write request to the source disk adapter, such as the source disk adapter 30 for a write to the source logical device 36A. The controller 87 receives that request in step 170 and tests the corresponding PB bit associated with the source device in step 171, such as the PB bit in the corresponding header [[96 ]]96A of the source Track ID Table [[56]]55. The PB bits in a given column collectively correspond to all the tracks in the device. However, the set bits in a column will identify those files, or other data subsets, that are to be copied. Thus, the PB(s) bit positions constitute, as part of the operating environment, a list of the predetermined source storage locations in the source disk storage device. Similarly, the IND bit positions in the destination device Track ID Table provide a list of the predetermined destination storage locations in the destination device.

Please replace the paragraph beginning at page 26, line 5 with the following:

During a normal operation, if a PB bit in the source device Track ID Table, such as the Track ID Table [[56 ]]55 in FIG. 2, is cleared, the track is either not in the extent or already has been transferred. If the PB bit is cleared or the session is not active, no copying is required. Step 172 diverts to step 173 to complete the write operation in a normal fashion. Step 174 then sends an acknowledgement to the host application that issued the write request, such as the HOST APP A application 22 in FIG. 1.

Please replace the paragraph beginning at page 34, line 3 with the following:

The impact of setting an active flag is shown in the copy program and request responses of FIGS. 7 through 9. Specifically if the active flag is not set, the copy program in FIG. 7 does not begin because step 150 transfers control to step 151 that aborts the copy program. When a write operation is [occurring] occurring from the host as shown in FIG. 8, step 172 bypasses the sequence that calls the copy program in step 176. The new data is written to the source disk storage device. This is consistent with an approach whereby preprocessing occurs and, for a point-in-time backup, the point-in-time is the instant at which the call for the copying to begin occurs. In the case of a read or write operation from

the destination host as shown in FIG. [[8]]<sup>9</sup>, step 182 aborts any read or write operation in step 183. In this situation if the session is not active, then writing data to the destination device may lead to inappropriate information. No data will be copied to the destination device for a read operation. Consequently no read or write operation will occur with the destination device until the copying program is actually operating.